



United States Department of the Interior

FISH AND WILDLIFE SERVICE
2524 South Frontage Road, Suite C
Vicksburg, Mississippi 39180-5269



December 15, 1999

Mr. Douglas J. Kaimen
Planning, Programs, and Project Management Division
Vicksburg District, U.S. Army Corps of Engineers
4115 Clay Street
Vicksburg, Mississippi 39180-3435

Dear Mr. Kaimen,

I am writing in response to your letter of October 6, 1999, requesting confirmation on the alternative(s) that the U.S. Fish and Wildlife Service desires to be included in the final array of alternatives to be evaluated in the forthcoming Corps report on the Yazoo Backwater Area Project. Please note that in conveying the alternatives the Service wishes to be considered, we are not conveying our position as to what the recommended plan should ultimately be. That position will be provided to the District in our final Fish and Wildlife Coordination Act Report which will be developed after reviewing the environmental impacts and trade-offs associated with the full array of alternatives and after such further coordination as may occur within the "consensus building" process organized by the local sponsor.

As the Service has indicated previously, we recommend that the final array of alternatives include a purely non-structural alternative and a combination structural/non-structural alternative. As to the non-structural alternative, we recommend that the specific project features be identified by the Environmental Protection Agency, Region IV in consultation with the Vicksburg District on the basis of the extensive, but as yet unpublished analysis conducted for EPA by Dr. Leonard Shabman, Virginia Tech University. In the absence of input from EPA, we recommend that the Corps analyze the non-structural alternative that they believe most effectively addresses flood damages through non-structural measures with an emphasis on restoration of agricultural lands inundated by the two-year frequency event and various flood-proofing/relocation options for dealing with non-agricultural damages above the two-year event.

The combined structural/non-structural alternative recommended for consideration by the Service includes four basic elements:

Designation of the area inundated by the two-year frequency event as a "Floodplain Restoration Zone";

Construction of a pumping plant of such size and configuration as may be determined by the Corps best achieves the dual objectives of flood plain restoration below the two-year event and flood damage reduction above the two-year event;

Flood proofing/relocation of structures within the “residual 100-year event” (i.e. the area that would remain within the 100-year event with a pump in operation);

A coordinated plan of operation for the proposed pumping plant and existing flood gates that balances the dual objectives of floodplain restoration below the two-year event and structural flood damage reduction above the two-year event.

As to item one above, this project feature would involve the acquisition from willing sellers of cleared land restoration easements on 102,516 acres of agricultural land within the two-year event (less whatever acreage is enrolled in the Wetland Reserve Program in the interim) and woodland preservation easements on 75, 238 acres of privately owned forest lands within the two-year event. Please note that the acreage figures of 107,000 and 91,600 contained in your letter do not agree with our analysis. We are currently working with your staff to insure consistency in our respective databases and to resolve these discrepancies.

As to item two above, it is our understanding that most alternatives under consideration involve a 14,000 cfs pumping plant. If however, based on ongoing hydrologic analyses, the Corps determines that a different size pump would more efficiently or effectively accomplish the dual objectives of floodplain restoration below the two-year event and flood damage reduction above, such a pump should be considered as part of this alternative.

As to item three above, this feature is an acknowledgment that significant areas would still be subject to inundation by a 100-year event with a pump in operation and that flood-proofing/relocation should be employed to deal with the residual damages to structures and residences. As discussed during the “consensus process”, relocation measures should not be limited to simply reimbursement at appraised value but instead provide for relocation within the immediate community in conditions that equal or exceed pre-project conditions.

As to item four above, this project feature would involve a coordinated plan of operation for the proposed pumping plant and existing flood gates that considers three facets of operation:

The “hold elevation” defined as the elevation at which water would be held on the land side of the Steele Bayou Structure during low-water conditions (currently, approximately 70 feet NGVD);

The “gate-closed elevation” defined as the elevation at which the gates at Steele Bayou are closed in response to rising stages on the Mississippi River (currently, approximately 75 feet);

The “pumping elevation” defined as the on/off elevation for pump operation.

The operational plan recommended for consideration is displayed in Table 1. This plan of operation would increase the “hold elevation” from 70 to 73 feet during low-water conditions. The “gate-closed elevation” would increase from 75 to 87 feet during winter/spring and to 80 feet during the summer/fall period. The intent of the higher “gate-closed elevations” is to restore the Mississippi River’s hydrologic connection to the Backwater Area up to the elevation of the one-year frequency event (87' NGVD at the Steele Bayou Structure). Please note that this recommended increase in the “gate-closed elevation” is NOT a recommendation to close the gates at Steele Bayou and hold, impound, or otherwise pond water at any elevation higher than 73 feet. It is instead a recommendation to allow stages within the Backwater Area to rise and fall with the Mississippi River up to an elevation of 87 feet within the ecologically critical winter/spring period.

Regarding pumping elevation, the Service has stated repeatedly that its overriding concern is for a pumping elevation that maintains wetland functions and values associated with the two-year frequency event **and** that does not have the intent or effect of promoting or sustaining flood susceptible land uses below the elevation of the two-year event (91' NGVD at Steele Bayou). In this regard, Table 1 displays two options. Option 1 calls for an on/off pumping elevation of 88.5' which the District’s hydrology and hydraulics staff has determined will maintain the extent and duration of a “two-year frequency wetlands event” (88.6'). The two-year frequency wetlands event is a 50% frequency, 13-day duration flood event which corresponds with the level of overbank flooding associated with regulatory wetlands. Option 2 calls for a static pumping elevation throughout the year at the elevation of the two-year frequency annual event, 91'.

A final note regarding the “Service alternative”. Throughout the consensus building process, the Service has acknowledged the potential adverse impacts of large scale reforestation on the tax base of the affected counties. In earlier presentations, we discussed options for making “payments in lieu of taxes” as a project expense. It is our understanding that the local sponsor and the affected counties are proposing state legislation to address this issue. We are prepared to defer to local interests as to the best way of dealing with this issue and have thus omitted payments as a project feature.

On other matters of coordination, there were discussions at our most recent meeting as to which of the final array of alternatives should be subject to sensitivity analyses based on the differing projections of the Service and the Corps regarding future without-project conditions. We recommend that those analyses be conducted on the NED plan and any other alternative in the final array that proposes a pumping elevation below 87 feet. To this end, we will need to coordinate in the immediate future with the aim of agreeing on the impact of the NED plan on restoration projected to occur without the project. As to when we will be able to provide our draft FWCA report, there are still several items of information that will be needed beforehand. These are listed below.

Description of the final array of alternatives.

The results of the biological impact analyses being conducted by the Waterways Experiment Station for terrestrial wildlife, fisheries, wetlands, and water quality under both the Corps’ and the Service’s future without-project scenarios.

Results of the period-of-record hydrologic routings of the final array of alternatives.

Results of the economic analyses of the final array of alternatives with specific reference to the following benefit categories:

- Flood damage reduction to structural property;
- Flood damage reduction to roads and bridges;
- Reduction of agricultural crop loss and increased productivity of existing cropland;
- Intensification of existing cropland usage;
- Reduction of flood damages to non-crop items;
- Reduction of flooding to catfish farms;
- Reduced flood insurance costs;
- Reduced emergency flood fight costs.

Easement definitions and associated costs.

Digital files of the 1-year, 2-year, 10-year, and 100-year flood event with the NED plan in operation.

Digital files of the 1-year, 2-year, 10-year, and 100-year flood event associated with an 88.5' pumping elevation.

Maps depicting land use acres affected by the 2-year frequency event for 80' and 88.5' pumping elevations.

Lastly, we appreciate the continuing cooperation of your staff during plan formulation. The formulation and evaluation of a final array of alternatives involves complex hydrologic and environmental analyses. We are especially appreciative of the energy and expertise of your hydrology and hydraulics staff in helping work toward a plan of development that meets the dual objectives of floodplain restoration and flood damage reduction within the Yazoo Backwater Area.

Sincerely,

/s/

Charles K. Baxter
Yazoo Backwater Team Leader

Copies Furnished:

Mr. Jim Wanamaker, Mississippi Levee Board, Greenville, MS
Mr. John Hankinson, EPA Regional Administrator, Atlanta, GA
Mr. Sam Hamilton, U.S. FWS Regional Director, Atlanta, GA

TABLE 1. SEASONAL WATER MANAGEMENT OPTIONS, YAZOO BACKWATER AREA PROJECT.

Structure Operation	Month											
	J	F	M	A	M	J	J	A	S	O	N	D
Hold Elevation ¹	73'	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	----->
Gate Closed Elevation ²	87'	87'	87'	87'	87'	80'	80'	80'	80'	80'	87'	87'
Pump On/Off Elevation												
Option 1 FWS	88.5'	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	----->
Option 2	91'	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	----->

¹ Water elevation held during the summer months to augment low flows.

² Gate closed elevation applies to both Steele Bayou and Little Sunflower Structures.